

Preliminary Environmental Assessment

Bonneville-Alcoa Access Road Project

Bonneville Power Administration

July 2003

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Preliminary Environmental Assessment

Responsible Agency: U.S. Department of Energy, Bonneville Power Administration (BPA)

Name of Proposed Project: Bonneville-Alcoa Access Road Project

Abstract: Bonneville Power Administration proposes to establish a half mile of access road to tower 9/1 along the Bonneville-Alcoa No. 1 115-kV transmission line. The road is needed to replace maintenance and emergency access to tower 9/1 because the road previously used to access the tower is blocked by a landslide that occurred in 1996. Approximately 1/8 mile of the proposed road exists, although it is overgrown and needs brush clearing. The remaining 3/8 mile of road would be constructed.

The environmental analysis determined that the Proposed Action would have no significant impacts. There would be short-term, construction-related impacts such as noise, dust, vegetation disturbance, soil compaction and erosion. Approximately 12 conifers and a number of deciduous trees and shrubs would be permanently removed. The road would come within 120 feet of a wetland, but the wetland would not be affected.

In addition to the Proposed Action, BPA is considering the No Action Alternative. In this alternative, BPA would not clear or construct the half mile of proposed access road to tower 9/1, which would remain inaccessible by road for routine maintenance. Without regular maintenance, the potential that emergency repairs could be needed would increase. An emergency at the tower probably would require reconstructing the existing access road, which is expected to result in greater environment impacts than the Proposed Action.

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For more copies of this document, call (800) 622-4250 and ask for the document by name. The document is also available at the BPA, Environment, Fish and Wildlife Home Page: [www.efw.bpa.gov/cgi-bin/PSA/NEPA/SUMMARIES/Bonneville-Alcoa Access Road Project](http://www.efw.bpa.gov/cgi-bin/PSA/NEPA/SUMMARIES/Bonneville-Alcoa%20Access%20Road%20Project).

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Table of Contents

CHAPTER 1. NEED FOR AND PURPOSES OF ACTION	1
1.1 Underlying Need for Action	1
1.2 Purposes	1
1.3 Public Involvement	1
CHAPTER 2. PROPOSED ACTION AND ALTERNATIVES	1
2.1 Proposed Action	1
2.2 No Action Alternative	3
2.3 Alternatives Considered but Eliminated	3
2.4 Comparison of Alternatives	4
CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS	5
3.1 Land Use	6
3.2 Soils and Geology	7
3.3 Vegetation	8
3.4 Streams and Water Quality	10
3.5 Fish and Wildlife	10
3.6 Wetlands and Floodplains	14
3.7 Scenic Resources	15
3.8 Noise, Air Quality, and Public Health and Safety	19
3.9 Recreation Resources	20
3.10 Cultural Resources	21
3.11 Cumulative Effects of the Proposed Action	22
CHAPTER 4. ENVIRONMENTAL CONSULTATION, REVIEW, AND PERMIT REQUIREMENTS	23
4.1 National Environmental Policy Act	23
4.2 Threatened and Endangered Species	23
4.3 Essential Fish Habitat	23
4.4 Fish and Wildlife Conservation	23
4.5 Migratory Bird Treaty Act	23
4.6 Archaeological, Cultural, and Historic Resources	24
4.7 Federal, State, Area-wide, and Local Plan and Program Consistency	24
4.8 Floodplains and Wetlands Protection	24
4.9 Recreation Resources	24
4.10 Permits for Rights-of-Way on Public Lands	24
4.11 Clean Air Act	24
4.12 Global Warming	24
4.13 Noise Control Act	25
4.14 Resource Conservation and Recovery Act	25
4.15 Requirements Not Applicable to this Project	25
CHAPTER 5. REFERENCES	26
CHAPTER 6. PERSONS AND AGENCIES CONSULTED	27
CHAPTER 7. GLOSSARY	28
APPENDIX A	1
Practicable Alternative Test for Wetland Buffer	1
Natural Resources Mitigation Plan for Wetland Buffer	1

Chapter 1. Need for and Purposes of Action

1.1 Underlying Need for Action

Bonneville Power Administration (BPA) needs to take action to ensure transmission system **reliability**¹ in the Vancouver/Camas/North Bonneville area of southwestern Washington. Both routine and emergency maintenance on all Bonneville transmission lines are integral to providing such reliability.

BPA's existing Bonneville-Alcoa No. 1 115-**kilovolt** (kV) **transmission line** is located in Clark and Skamania counties in Washington (Figure 1). The transmission line serves Bonneville's utility customers, which in turn serve communities in southwestern Washington. Vehicle access to tower 9/1 on the transmission line was largely destroyed by a landslide in 1996, which now blocks the existing access road from State Route (SR) 14 to the tower. The tower is within the Columbia River Gorge National Scenic Area, approximately 4.5 miles west of Beacon Rock and 10 miles east of Washougal.

Damage to or normal deterioration of tower 9/1's components or the tower itself would require the use of large and heavy equipment to repair or replace components or the entire tower. Access by such vehicles currently is impossible.

1.2 Purposes

Purposes are goals to be achieved while meeting the need for the project. In satisfying the underlying need, Bonneville wants to achieve the following purposes:

- Minimize environmental impacts
- Demonstrate cost-effectiveness

1.3 Public Involvement

A letter dated February 14, 2003 was sent to agencies, Tribes, legislators, nearby property owners, and other potentially interested individuals and groups (see Chapter 6) inviting comment on the proposed project. BPA received no comments in response to the letter.

Chapter 2. Proposed Action and Alternatives

2.1 Proposed Action

To meet the need, Bonneville proposes to establish ½ mile of access road to tower 9/1 on the Bonneville-Alcoa No.1 115-kV transmission line (Figure 1). The project would require:

- Clearing 1/8 mile of existing road
- Constructing 3/8 mile of new road

The project would cost approximately \$40,000.

¹ Words in the text shown in **bold italics** are defined in the glossary (Chapter 7).

SKAMANIA COUNTY, WA

31

36

Caliber Creek

Good Bear Creek

1/8 mile of existing road to be cleared

Proposed 3/8 mile of new access road

Tower 9/1

To Skamania

Smith Cripe Rd.

Sneider Barks Rd.

Bonneville-Alcoa Transmission Line

6

8

To Washougal

Original access road to tower 9/1; no longer accessible

Columbia River

0 0.25 0.5 Miles

WASHINGTON

PACIFIC OCEAN

PROJECT LOCATION

LEGEND

- Transmission Line
- Existing Road
- Proposed New Road
- Existing Road to be Cleared
- Tower 9/1
- Proposed New Road

BONNEVILLE
GEOGRAPHIC INFORMATION SYSTEM

JULY 2001

N

2

The proposed access road would begin at an intersection with Smith-Cripe Road, and would generally extend southeast to tower 9/1. From Smith-Cripe Road, the first 1/8 mile of the proposed road already exists. It is overgrown and would be cleared of brush within the existing 20-foot *right-of-way* (ROW). The remaining 3/8 mile of the proposed road would be constructed. A 50-foot-wide ROW would be acquired for this new section, approximately 22 feet of which would need to be cleared of trees and shrubs. It is BPA's practice to obtain a 50-foot ROW for new roads and a 20-foot ROW for existing roads. The wider ROW for new roads allows BPA some flexibility in road placement to allow for proper engineering and to avoid sensitive resources. BPA would need to obtain a special uses permit from the U.S. Forest Service (USFS) and easement rights from one private landowner.

The project's legal description is: T1N, R6E, NE ¼ NW ¼ Sec 6; T1N, R6E, NW ¼ NE ¼ Sec. 6; and T2N, R6E, SE ¼ SW ¼ Sec. 31 of the Willamette Meridian.

2.2 No Action Alternative

Under this alternative, Bonneville would not establish the proposed half mile of access road to tower 9/1, and would not plan to reconstruct the existing blocked access road. This would leave the tower inaccessible by vehicle for routine maintenance. However, because the lack of routine maintenance would increase the likelihood that emergency repairs would be required, emergency access for large and heavy equipment may need to be established at some time in the future. It is likely that this unplanned emergency access would use the route of the existing blocked access road where BPA currently has legal access rights (see Figure 1), either by clearing the landslide in this area or by cutting trees to establish access around the landslide. In an emergency, BPA would not have time to acquire legal access rights in a new location.

2.3 Alternatives Considered but Eliminated

During the design process, three alternatives were considered but eliminated from detailed consideration, as discussed below.

2.3.1 Reconstruct previous access road

Access to tower 9/1 was originally from south of the transmission line, off State Route (SR) 14. In 1996, a landslide destroyed the road, blocking this access. Because tower 9/1 sits on "hogback"-type topography with steep slopes, reconstruction of the existing access road by clearing the landslide could contribute sediment to adjacent fish bearing streams during construction. Over the life of the transmission line, use of the road could add more sediment to the stream due to the position of the road on steep slopes above stream channels. Reconstructing the road would also entail building a bridge over Caliber Creek, a fish bearing stream that flows directly into the Columbia River. Bridge construction could potentially adversely affect listed fish species in Caliber Creek (see Section 3.5.1) by reducing riparian vegetation and increasing turbidity. Because of potential adverse effects to water quality and listed fish species, this alternative was eliminated from further consideration.

2.3.2 Clear existing trails

Bonneville considered clearing and widening an existing trail north of the transmission line ROW that leads to an area near tower 9/1. The existing trail is approximately 3 feet wide, and

follows a circuitous route 200 – 300 feet west of the proposed road². The trail descends steep slopes (at least 25-30%)—much steeper than the 15% slopes found in one 50-80 foot section of the proposed road. Use of road construction equipment on these slopes would potentially increase erosion and contribute sediment to the surrounding lowland areas and streams, because the existing trail does not traverse the slope but heads directly downhill. It is unlikely that large tower repair equipment would be able to negotiate such slopes if needed in the future. Because the existing trail is a less direct route to the transmission line ROW, more trees would need to be cleared than for the Proposed Action. Clearing trees on steep slopes may make the slopes unstable. Because of potential adverse effects to slope stability and water quality, this alternative was eliminated from consideration.

2.3.3 Use walk-in access only

Bonneville considered not establishing vehicle access, relying instead on a walk-in trail to provide access to tower 9/1. While this alternative would have minimal effects when compared to the construction of an access road, the continued lack of a road would make it impossible for large maintenance equipment to access the tower if necessary and thus would not meet the need to maintain system reliability in emergencies.

2.4 Comparison of Alternatives

Table 1 compares the Proposed Action and the No Action Alternative based on the purposes of the project described in Section 1.2.

Table 1. Comparison of the Proposed Action and No Action Alternatives

Purpose	Proposed Action	No Action Alternative
Minimize environmental impacts	The proposal would have minor or no impact on environmental and human resources (see Table 2). These minor effects would be greater than the impact of No Action in the short term, but potentially less than No Action in the long term.	Initially, No Action would have no effect on environmental or human resources. In the event of an emergency, however, construction of a new road close to the location of the former road could have greater environmental impacts than the Proposed Action (see Table 2).
Demonstrate cost-effectiveness	In the short-term, the project cost of \$40,000 is clearly more than the \$0 cost for No Action; however, it provides vehicle access to a structure which, if unavailable in an emergency, could be significantly more costly to provide.	The \$0 initial cost of No Action would save money in the short term; however, if an emergency required construction of a road, its cost could be significantly higher than the proposal due to the need to get it done quickly, and potentially in inclement weather and difficult construction conditions.

² Figure 1 is a reproduction of part of the USGS quad sheet for Multnomah Falls. It shows an unimproved road to the east of the proposed road. This is not the trail described in this section, nor does it accurately show the location of an overgrown road in the vicinity—parts of which are now only a trail—and which is not useable due to terrain and other factors.

Chapter 3. Affected Environment and Environmental Effects

This chapter evaluates the potential impacts of the Proposed Action and No Action alternatives on human and natural resources (sections 3.1 – 3.10). Section 3.11 describes the cumulative effects of the Proposed Action. The project is too small to have a noticeable effect on the economy of the area, so effects on socioeconomic resources are not discussed.

Table 2. Summary of Potential Effects of the Proposed Action and No Action Alternatives

Resource	Proposed Action	No Action Alternative
Land Use	Short-term increases in noise and dust at one residence during 3-4 week construction period. Change in land use from 1 acre of forest to unpaved road.	No impacts expected because in an emergency, the former road location would be used to the extent possible.
Soils and Geology	Minor, short-term increases in erosion. Soils on the road would be compacted, reducing soil productivity. Mitigation would limit long-term impacts to minor changes in local runoff and erosion patterns.	No impacts expected in the short term. Construction of an emergency road could increase erosion due to hurried, unplanned removal of vegetation and landslide debris.
Vegetation	Permanent removal of 12 conifers 8-18 in. dbh, plus deciduous trees and shrubs. Character of 1 acre of vegetation would change.	No impacts expected in the short term. In an emergency, potential clearing of numerous trees and some riparian vegetation.
Water Quality	No impacts expected because no streams, lakes, or ponds are nearby.	No impacts expected in the foreseeable future. Potential short-term increases in erosion into streams if road is built in an emergency.
Fish and Wildlife	Displacement of birds and animals from 1 acre of deciduous/conifer forest to similar habitat nearby. Avoidance of area during construction by bald eagles that might use it occasionally.	No impacts expected in the near term. In an emergency, potential short-term effects on anadromous species in streams crossed by former road due to increases in sediment.
Wetlands	No impacts expected to wetland due to mitigation.	No impacts expected because no wetlands are in the former road location.
Floodplains	No impacts expected because no floodplains are in the project area.	No impacts expected in the near term. Fords for an emergency road could slightly reduce floodwater absorption capacity of the floodplains at Good Bear and Caliber creeks.
Scenic Resources	No impacts expected because road would be screened by vegetation or topography.	No impacts expected unless clearing for an emergency road made tower 9/1 more visible.
Air Quality	Minor, short-term increases in dust during construction.	No impacts expected in short term. Emergency road could cause impacts similar to Proposed Action.
Noise	Minor, short-term increase in noise at one residence during construction.	No impacts expected in short term. Emergency road could cause impacts similar to Proposed Action if residences are nearby.
Cultural Resources	No impacts expected because no resources are in the project area.	No impacts expected in short term; impacts of an emergency road are unknown.
Socioeconomics	No impacts expected—project is too small.	No impacts expected if no work is done.

3.1 Land Use

3.1.1 Affected Environment

The proposed project is in Skamania County, Washington, in the Columbia River Gorge National Scenic Area (CRGNSA). The Scenic Area was created in 1994 to protect and enhance the scenic, natural, cultural and recreational resources of the Columbia River Gorge while encouraging economic development (BPA 1996). The USFS manages the 80-mile-long Scenic Area, guided by a management plan that establishes standards for protection of these resources (USDA FS & CRGC 1992). The Gorge contains hiking and mountain biking trails with scenic vistas, wildflowers, and spectacular waterfalls; water-related recreational opportunities such as windsurfing; and a variety of camping and picnicking sites (BPA and USDA FS CRGNSA 1996). The Bonneville-Alcoa transmission line itself was built in 1941, decades before the Scenic Area was established.

Beginning at Smith-Cripe Road—a Skamania County road—an existing private road travels east and down the slope for about 1/8 mile (see Figure 1). BPA proposes to acquire rights to clear and use this road. From this point, the proposed new road would continue south on USFS-managed land for about 3/8 mile through dense forest and shrubs to the transmission line ROW and tower 9/1.

Land use in the vicinity of the proposed road includes privately owned rural residences and public forest lands designated as “Forest” in the CRGNSA Management Plan. The home closest to the project area is within 200 feet of the beginning of the existing road and approximately 760 feet from the start of the proposed new road segment. There are 7 or 8 other residences in the general area, off Smith-Cripe Road to the southwest, on the west side of Caliber Creek.

3.1.2 Potential Effects of the Proposed Action

The clearing and road construction would require cutting trees and shrubs on approximately one acre of a Special Management Area (SMA) designated in the Management Plan as “Forest.” Under the SMA guidelines for “Forest,” road construction or reconstruction is considered a “Review Use,” which means plans are subject to review by the USFS and require a special uses permit. Subsequent sections of Chapter 3 discuss the project’s compliance with SMA guidelines that address soils, water quality, sensitive vegetation and wildlife, wetlands, scenic values, and cultural and recreational resources.

Cutting the trees to create a transmission line access road would change the use of the land by converting it from forest to a road, but would not change surrounding land uses. In addition, the trees at the site have little if any commercial value (see Section 3.3, Vegetation). The closest home could experience short-term noise and dust during the 3- to 4-week construction period (see Section 3.8), but long-term use of the property would not be changed. Other homes in the vicinity would not be affected.

3.1.3 Potential Effects of the No Action Alternative

Because access to tower 9/1 would not be planned or constructed, the No Action Alternative would have no immediate effect on current land use. However, in an emergency, a road would have to be built as close as possible to the location of the previous road, where BPA has legal rights to access the transmission structure. An emergency road probably would not substantially change land use, as it would as closely as possible follow the previous road alignment in the vicinity of the landslide.

3.2 Soils and Geology

3.2.1 Affected Environment

The proposed access road is within the Cascade Mountains physiographic province, on the north side of the Columbia River. In general, the site faces south and is about a half mile from the river. The upper end of the proposed road (near the Smith-Cripe Road) is at an elevation of about 630 feet, and the lower end, at tower 9/1, would be at about 210 feet elevation (Figure 1). Slopes in the area of the road ROW are 10-30 percent. Within the project area, soils have formed in *colluvium* derived from basalt and are well drained.

3.2.2 Potential Effects of the Proposed Action

All roadway blading and ground surface work would use a caterpillar and excavator within a three- to four-week period in late summer or early fall of 2003. The subgrade would be compacted, and crushed rock would be laid on the running surface of the roadbed as a stable substrate. The road would be designed to enable rain, snow, and surface water to percolate through the rock and into the ground. No asphalt, concrete, or other impervious surface materials would be used. No bridges or culverts are planned, as the proposed road would not cross any perennial surface water.

The potential for soil erosion is moderate throughout the project area. Where the proposed road nears the transmission line ROW, however, the potential for soil erosion is severe due to slopes steeper than 15 percent (USDA SCS 1990). Road grades would average between 2 and 8 percent, with approximately 20 percent of the road (400 feet) at the 8 percent grade.

Direct impacts on soils could result from vegetation clearing and from grading by heavy machinery. Clearing and grading strips both vegetation and the top, most biologically active, layer of soil. Heavy machinery also compacts the soil, reducing its productivity. Erosion and runoff rates could increase locally during road construction. Impacts would be greatest during and immediately after construction until the disturbed sites have been revegetated. Revegetation and rehabilitation of compacted sites would reduce runoff and erosion rates to near pre-construction levels (see Section 3.2.3), although the road could cause minor but long-term changes in localized runoff and erosion patterns.

3.2.3 Mitigation for the Proposed Action

By following best management practices, impacts of erosion near the site would be short-term, reduced or eliminated. Thus, the Special Management Area guideline (USDA FS & CRGC 1992) that requires control of all soil movement in the project area would be met, as would numerous other guidelines related to preservation of natural resources (see in particular Section 3.6, Wetlands and Floodplains). Best management practices include:

- The road will be designed to control run-off and prevent erosion, with use of low grades, *outsloping*, and *intercepting dips*.
- Construction activities (grading, vegetation clearing, establishing drainage features, and placement of surfacing rock) will be restricted to the road surface and ROW.
- Work will be done during the driest part of the year to minimize potential for compaction, rutting, and subsequent loss of soil productivity.

- To minimize erosion, disturbed areas will be promptly seeded with a native grass seed mixture suited to the site.
- Sediment barriers and other suitable erosion control devices will be installed where needed to minimize movement of sediment.

3.2.4 Potential Effects of the No Action Alternative

Because no road would be constructed, there would be no immediately foreseeable impacts to soil. However, emergency entry onto the transmission line ROW through the old road site could increase erosion over current conditions by exposing soil through hurried and unplanned removal of vegetation and landslide debris. Some soils could erode into streams due to the road's position on steep slopes above stream channels. See also Section 2.3.1.

3.3 Vegetation

3.3.1 Affected Environment

The majority of the watershed is characterized by hardwood and conifers (Figure 2) (Keller 2003). The dominant vegetation along the proposed road right-of-way is big-leaf maple and red alder, with lesser amounts of Oregon oak, western red cedar, and Douglas fir (BPA 1996). There are no large and mature coniferous trees located within the proposed roadway. The estimated hardwood to conifer ratio is approximately 60/40. The project area also contains blackberry, Cascade Oregon grape, elderberry, snowberry, salmonberry, vine maple, and a variety of ferns and herbaceous cover. There is no old growth in the project area and very little, if any, in the watershed. The forest structure in the project area lacks complexity (i.e., snags, variety of tree sizes and age classes, dead and down timber, mature stand characteristics, etc.), and does suggest past human disturbances along the immediate road right-of-way (blackberries, old trails and roads, nearby private lands) (USDA FS 2002).

3.3.2 Potential Effects of the Proposed Action

Because the entire road alignment is overgrown with vegetation (Figure 2), a total width of about 22 feet would be cleared for the actual road surface; that width includes 5 feet on each side of the roadbed. Vegetation would be cleared both by hand and by blading. No herbicides would be used during construction or maintenance of the road.

Approximately 12 conifer trees between 8 and 18 inches diameter at breast height (dbh), as well as a number of deciduous trees and shrubs, would be removed. The clearing would change the character of the vegetation along the road and open up the canopy. The vegetation is not a unique group of species, is not old growth, and has little if any commercial value. The U.S. Fish and Wildlife Service (USFWS) identified no listed plant species in the area (letters dated July 30, 2002 and January 21, 2003), so CRGNSA guidelines on buffer zones would not apply. The cut vegetation would be lopped and scattered away from the roadbed but within the road ROW.

3.3.3 Mitigation for the Proposed Action

- Equipment operators and the construction crew would stay within the ROW to minimize impacts to adjacent forest and shrub areas.
- BPA will limit the number of trees removed to those necessary for the 22-foot cleared width.

- Where appropriate after surface work is completed, native grasses and herbaceous seeds will be sown in disturbed areas and on the roadbed.
- To the greatest extent possible, operations will be limited to prevent any unnecessary destruction, scarring, defacing, or removal of the natural vegetation and surroundings.
- To minimize the establishment of *noxious weeds*, construction crews will wash equipment and vehicles before entering construction areas.



Figure 2. Vegetation on Proposed New Access Road Segment

3.3.4 Potential Effects of the No Action Alternative

No trees would be cut in the foreseeable future. However, in an emergency, constructing a new road near the former road would require cutting a number of trees to get around the landslide. Riparian vegetation at creek crossings could also be destroyed.

3.4 Streams and Water Quality

3.4.1 Affected Environment

The proposed road would be located between two perennial streams, Caliber and Good Bear creeks, but would be mainly in the Caliber Creek drainage. Neither stream is listed on the Washington Department of Ecology's most recent 303(d) list of impaired water bodies (WDOE 1998).

3.4.2 Potential Effects of the Proposed Action

The road would be located at least 600 feet from Caliber Creek and even further from Good Bear Creek, so no impacts are expected. The project would be well outside the 200-foot buffer zones required by CRGNSA guidelines for perennial streams.

3.4.3 Potential Effects of the No Action Alternative

With no construction planned, no predictable impacts to streams would be expected. However, in an emergency at tower 9/1, vehicles would need to ford the two creeks, because that is where BPA currently has legal access rights. Depending on the size of equipment needed at the structure and the time of year of the emergency, sediment levels in the streams could be increased, with resulting adverse effects on water quality and fish. In addition, clearing the landslide across the existing access road could contribute sediment to adjacent fish bearing streams. Because emergencies often occur in winter, effects could be noticeable and last until conditions are appropriate to make any necessary repairs to damaged stream banks or streambeds. See also Section 3.5, Fish and Wildlife.

3.5 Fish and Wildlife

3.5.1 Affected Environment

Although the project area has not been surveyed specifically for the proposed action, it likely provides habitat for animals and birds common in other parts of the CRGNSA, including coyote, deer, squirrels and chipmunks, various raptors, jays, and smaller bird species. *Anadromous* fish are unlikely to be found in Good Bear or Caliber creeks in the vicinity of the project due to natural and human-made barriers, including a 40-foot waterfall at river mile 0.62 on Good Bear Creek (Keller 2003). However, anadromous fish, including "dense populations of coho" salmon have been observed in the lower half mile of Good Bear Creek (C. Fiedler, USFS, personal communication, July 2003).

Table 3 shows the species listed under the Endangered Species Act (ESA) that may be in the project area. The region in general has been designated as Essential Fish Habitat for chinook and coho salmon under the Magnuson-Stevens Fishery Management and Conservation Act.

Table 3. Threatened and Endangered Species Potentially in the Project Area

Species	Listing Status	Critical Habitat
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Threatened	N/A
Northern spotted owl (<i>Strix occidentalis caurina</i>)	Threatened	Designated January 15, 1992
Bull trout (Columbia River distinct population segment) (<i>Salvelinus confluentus</i>)	Threatened	Proposed critical habitat FR, Nov. 29, 2002*
Lower Columbia River chinook salmon (<i>Oncorhynchus tshawytscha</i>)	Threatened	Withdrawn**
Lower Columbia River steelhead (<i>Oncorhynchus mykiss</i>)	Threatened	Withdrawn**
Columbia River chum salmon (<i>Oncorhynchus keta</i>)	Threatened	Withdrawn**

* Proposed for the Columbia River distinct population segment.

** On April 30, 2002, the U.S. District Court for the District of Columbia approved a NMFS consent decree withdrawing the February 2000 critical habitat designations for this and 18 other salmon and steelhead populations (<http://www.nwr.noaa.gov/1press/Chdecree.html>; <http://www.nwr.noaa.gov/1habcon/habweb/VacatedCH/SourceDocs.html>).

Bald eagles may winter in the project vicinity; wintering season is from October 31 to March 31 (Keller 2003). A site visit on January 27, 2003, revealed no bald eagle nests nearby. A second pre-construction survey was conducted on June 3, 2003, and no eagle nests were found within 800 meters of the project area—the maximum buffer zone required by USFWS around eagle nests (see Section 3.5.3). The closest documented nest is 1.65 miles southeast of the proposed road, within 0.2 mile of the Columbia River (Keller 2003).

Northern spotted owl. Three single owl sightings have been documented in the vicinity of the project which were 4.75 miles, 7.66 miles, and 10 miles from the proposed access road. Three spotted owl pairs or reproductive sites have also been detected at distances of about 11.1 miles, 11.78 miles, and 12.8 miles from the proposed road (Keller 2003).

Designated critical habitat for the owl is within 1.8 miles of the project site but across the Columbia River in Oregon; on the Washington side of the river, designated habitat is 14 miles from the project site.

Bull trout. The project site is within proposed critical habitat for the Columbia River distinct population segment of bull trout, but no bull trout are known to be in Good Bear and Caliber creeks and no records support historical populations in either creek (Chuti Feidler, USFS, personal communication, 1/8/03). In a site visit on January 8, 2003, a biologist observed high gradients, a narrowed channel, and limited pool/riffle ratio, indicating limited bull trout habitat (Keller 2003).

Lower Columbia River chinook salmon, Columbia River chum salmon, and Lower Columbia River steelhead. The USFS reports that chinook have been identified at the confluence of Good Bear and Caliber creeks (in the vicinity of SR 14 and the Burlington

Northern Railroad); chum salmon and steelhead also have been reported in the same area. In spring 2003, the USFS surveyed Good Bear Creek for steelhead and found redds in the lower half mile (C. Fielder, USFS, personal communication, July 2003). However, an impassable natural gradient barrier prevents upstream movement of anadromous species from this area into either creek near the proposed road. Although the USFS plans work on culverts further downstream that are partial to full barriers to fish passage, no entity plans to remove the natural barrier.

3.5.2 Potential Effects of the Proposed Action

Construction of the road would remove only a few conifers and some deciduous trees and shrubs (see Section 3.3, Vegetation). Individuals of certain smaller animal and bird species could be displaced slightly, but this second- or third-growth hardwood/conifer habitat is relatively abundant in the area. The existence of populations of these species would not be threatened. The amount of habitat removed would not affect larger bird or terrestrial species.

Although the project is within the region designated as Essential Fish Habitat for chinook and coho salmon, due to gradient, lack of stream complexity, and narrow channels, the streams near the project do not appear to contain habitat components that would be classified as “essential” for those species or that would make the creeks suitable for salmonids in general (Keller 2003). Coho are found only in the lower half mile of Good Bear Creek, which is too far from the proposed road to be affected by it (see Section 3.4.2).

Bald eagles. Because the nearest documented nest is 1.65 miles from the project site, use of heavy construction equipment during September or early October is unlikely to disturb any eagles in the unlikely event they would be nesting at this site so late in the season. The construction period would avoid the normal eagle wintering period. Helicopters and explosives would not be used for the project. However, it is possible that construction activity might cause eagles to avoid incidental use of the area until work is complete. The project would not destroy or alter any unusual or critical eagle habitat such as nesting or roost trees, nor would it adversely affect prey species or their habitat (Keller 2003). BPA use of the road a few times a year for maintenance is unlikely to disturb eagles that may incidentally use the area because eagles tolerate a certain amount of human presence, and BPA’s use would not significantly increase the amount of human activity in the project vicinity.

Northern spotted owl. The proposed road construction would not remove large mature coniferous trees; only about a dozen individual Douglas fir trees between 8 and 18 dbh are planned to be removed. These trees do not have the large limbs preferred for owl nesting. Known nest sites are at least 4.75 miles from the proposed road. Although designated critical habitat is within 1.8 miles across the Columbia River, the probability of spotted owls occupying the project area is low. Conditions preferred by this bird—contiguous mature or old growth tracts of conifers—do not exist. The noise from the caterpillar and excavator to be used during construction would be locally noticeable but not from the known owl sites, even if the wind direction was from the project site. The proposed construction schedule in September or early October would not interfere with owl nesting, as they would have completed nesting and fledging by that time. BPA use of the road a few times a year is unlikely to affect owls because suitable owl habitat does not exist in the vicinity (Keller 2003).

Bull trout. If bull trout do inhabit these streams, which is unlikely due to the lack of suitable habitat, the road has been designed to avoid potential impacts to either creek by staying a

minimum of 600 feet from the riparian portions of the creeks, avoiding instream work, working during the driest time of the year, keeping all scarified soils and vegetation material onsite, employing Best Management Practices during construction to further avoid/minimize the runoff potential, gating the road to avoid public access and human intrusion to the project area, using only crushed rock for the roadbed rather than applying an asphalt or impervious surfaces material that could accelerate runoff, reseeding exposed soil from road preparation to minimize the runoff potential, avoiding use of blasting or loud explosives, removing all excess road materials and scrap from the site, and avoiding burning, herbicides, or other airborne emissions.

Lower Columbia River chinook salmon and Lower Columbia River steelhead. Construction and use of the proposed road would not affect these species (see the previous paragraph).

Based on the results of this analysis, no buffer zones would be required for sensitive wildlife species or fish-bearing streams as described in the CRGNSA Management Plan guidelines.

3.5.3 Mitigation for the Proposed Action

- A pre-construction survey found no eagle nests in the project area. If a nest is found during construction, activities will be restricted as follows: No construction activities will take place within 800 meters of an active open nest or within 400 meters of an active screened nest³ between January 1 and July 15.
- A natural resources specialist will be assigned to the project to ensure that environmental and mitigation measures are effectively implemented.

3.5.4 Potential Effects of the No Action Alternative

Although there would be no immediately foreseeable impacts to fish and wildlife from the No Action Alternative, an emergency at tower 9/1 could require creating road access. BPA would only be able to access the structure through areas where it has existing legal rights to do so, which are from below the structure, off SR 14, and through the slide area. In an emergency, BPA would not have the months required to obtain legal access through a different area. Vehicles would have to ford Good Bear and Caliber creeks, and then, to get around the landslide, crews would probably need to cut trees and move earth to get to the structure. These activities, particularly if done in a hurry, could, at a minimum, increase sediment levels in the creeks. Higher sediment levels could harm any resident fish populations and could affect anadromous fish that occupy areas downstream, until repairs could be made. Effects on wildlife from emergency road construction probably would be minor and localized, although some riparian habitat could be temporarily damaged. Displacement effects could be similar to those described for the Proposed Action.

³ An “open” nest is one from which the construction activity or site is visible by line-of-sight; a “screened” nest is one from which the construction is not visible by line-of-sight.

3.6 Wetlands and Floodplains

3.6.1 Affected Environment

One forested *wetland* is approximately 120 feet from the proposed access road. Dominated by slough sedge and red alder, it is approximately 70 feet by 50 feet in a topographic depression east of the road. The road would not cross or affect any *floodplains* as both streams are in deep, steep canyons.

The CRGNSA guidelines related to wetlands in Special Management Areas are as follows:

- In riparian areas, wetlands, ponds, and lakes:
 1. Adding any fill or draining of wetlands is prohibited.
 2. A minimum 200-foot buffer zone shall be created on the landward side of each wetland, pond or lake; or a wider variance from this requirement shall be determined during the site plan analysis of the wetland or riparian area and those species inhabiting the area, as determined by the Forest Service biologist in consultation with state and/or federal agencies.
- Buffer zones shall be undisturbed unless it has been shown that no practicable alternatives exist, as evidenced by completion of a “no practicable alternative test.” New developments and uses may only be allowed in the buffer zone upon demonstration in the natural resources mitigation plan that no adverse effects would result.

3.6.2 Potential Effects of the Proposed Action

As stated above, a wetland in a Special Management Area must be surrounded by a buffer zone at least 200 feet wide. Because the proposed road is approximately 120 feet from the wetland boundary, the road would encroach on the buffer zone, although the wetland itself would not be directly affected. The proposed road crosses a small drainage—essentially a depression, with no channel or banks, through which surface water sometimes flows. The drainage serves as a hydrologic input for the wetland. A surface crossing would be constructed across the drainage to allow water to flow over and through the rock without channelization, thus preserving wetland hydrology. As discussed in Appendix A, there is no practicable alternative to locating the road within the wetland buffer. With the mitigation measures proposed for this project, the project activity would not affect wetland functions.

3.6.3 Mitigation for the Proposed Action

To avoid and minimize potential impacts to the wetland, the following mitigation measures would be implemented:

- The access road would avoid the forested wetland.
- No fill would be placed in wetlands.
- A surface crossing would be used to maintain normal hydrologic conditions in the wetland (see Appendix A).
- The wetland and its buffer would be flagged and construction vehicles and equipment would not leave the 50-foot ROW within the wetland buffer.

- Silt fencing would be placed between construction areas and the wetland to prevent movement of sediment into the wetland or buffer area.
- Vehicles would be washed before entering the project area to avoid the spread of noxious weeds.
- Weed-free hay bales would be used for erosion control.
- All disturbed soils would be seeded with native species following completion of construction.
- Construction equipment would be refueled and stored at least 150 feet from the wetland buffer and inspected daily for leaks.

3.6.4 Potential Effects of the No Action Alternative

Under the No Action Alternative, the proposed road would not be constructed, so the wetland buffer would not be affected. There are no known wetlands near the former access road. However, where a potential emergency road would cross Good Bear and Caliper creeks, further downstream from the Proposed Action, the creeks are no longer enclosed in steep canyons and so have floodplains. The capacity of these floodplains to absorb floodwaters might be slightly reduced by an emergency road, depending on the amount of compaction caused by vehicles fording the creeks.

3.7 Scenic Resources

3.7.1 Affected Environment

Because the proposed project is in a National Scenic Area, potential effects on the area's scenic quality are of concern. Several key viewing areas were identified by the USFS:

- Foreground views from SR 14
- Middle ground views from Interstate 84, SR 14, Columbia River, Multnomah Falls, Historic Columbia River Highway
- Background views from Sherrad Point on Larch Mountain, Portland's Women Forum scenic overlook, Historic Columbia River Highway, I-84, Bridal Veil Falls, Crown Point, Larch Mountain Road.

In the CRGNSA Management Plan, the road is in an area where the landscape setting has been designated as "Coniferous Woodland," and it is in a Special Management Area designated as "Forest" (see Section 3.1). The following guidelines from the Management Plan apply to projects in such areas that might affect scenic resources:

- New developments and land uses shall be evaluated to ensure that scenic resources are not adversely affected, including cumulative effects, based on visibility from key viewing areas.
- Coniferous Woodland and Oak-Pine Woodland: Woodland areas shall retain the overall appearance of a woodland landscape. New developments and land uses shall retain the overall visual character of the natural appearance of the Coniferous Woodland and Oak-Pine Woodland landscape.

- New developments and land uses in lands designated Federal Forest or Open Space shall meet the Visual Quality Objective (VQO) of “Retention.”⁴
- Use of plant species native to the landscape setting shall be encouraged. Where non-native plants are used, they shall have native-appearing characteristics.
- Proposed developments or land use shall be aligned, designed, and sited to fit the natural topography and to take advantage of vegetation and landform screening, and to minimize visible grading or other modifications of landforms, vegetation cover, and natural characteristics.

3.7.2 Potential Effects of the Proposed Action

In a preliminary review of the draft EA, the USFS sent two simulations of the proposed road on a landscape devoid of vegetation. Under such circumstances, the road might be visible from I-84, and possibly from other viewpoints such as the lower bridge at Multnomah Falls. In such a landscape, the network of roads that already exist in the area also would be visible, so BPA’s proposed road would not be more noticeable than any other.

In the currently vegetated landscape, however, the proposed road would not be visible from any of the designated viewpoints. Figures 3 - 5 show views of the site from the closest potential viewpoints, including directly across the river from I-84, from SR 14, and from Multnomah Falls. The view from Horsetail Falls on the historic highway is similar to the view from I-84. A number of tall conifers on the southern edge of the transmission line ROW near tower 9/1 would block view of the new road from below and from across the river. These conifers are outside the proposed ROW, on USFS land, and are unlikely to be cut unless the USFS authorizes such action. The topography on which the road would be constructed would also help to shield the road from key viewing areas, especially from viewpoints below the project site, such as from SR 14 and from on the Columbia River.

The project site is too small and too far up the Gorge to be visible from Larch Mountain Road, Sherrad Point, Crown Point (Figure 6), or Bridal Veil Falls.

The greatest visual exposure to the proposed access road would be from the transmission line ROW at tower 9/1; however, the ROW is not readily accessible to the public (the new road would be gated to prevent unauthorized entry). There are no designated recreational trails in the vicinity. The proposed road would not be visible from the residence located north of the existing road.

Thus, by careful location of the road to minimize the number of large trees cut, and by sowing disturbed areas, including the roadbed, with native grasses and herbaceous seeds suitable to the site (see Section 3.3.3), the proposed action retains the visual quality of the area and meets the Management Plan guidelines.

⁴ Retention: A visual quality objective that provides for management activities that are not visually evident to the casual visitor. Management activities may only repeat form, line, color, and texture that are frequently found in the characteristic landscape. Changes in their qualities of size, amount, intensity, direction, pattern, etc., shall not be evident.

3.7.3 Potential Effects of the No Action Alternative

No visual impacts are expected to occur beyond those already occurring from other existing roads in the project area. As can be seen from Figure 3, neither the old road location nor the landslide are visible from directly across the river on I-84. If the road had to be improved in an emergency, it might become more visible, but it is more likely that the tower itself would become more visible if the conifers directly below it needed to be removed.



Figure 3. View of Project Site from I-84



**Figure 4.
Looking
Toward
Proposed
Road Site from
SR 14**

From this viewpoint, the proposed road is blocked by topography and trees. Not even the transmission line is visible.



**Figure 5. View
from Multno-
mah Falls of
Ridge above
Road Site**

From this viewpoint at the Multnomah Falls parking lot, views of the proposed road would be blocked by foreground features. The site likely is too small and far away to be visible from the lower falls footbridge.



**Figure 6.
Looking East
(Upriver) from
Crown Point**

The proposed road would be invisible from this distance. The Portland Women's Forum scenic overlook is even further west than Crown Point.

3.8 Noise, Air Quality, and Public Health and Safety

3.8.1 Affected Environment

The Washington Administrative Code (WAC 173-60) specifies noise limits according to the type of property where the noise would be heard (the “receiving property”) as well as land use of the noise source. Nighttime noise limits in residential neighborhoods are 50 *decibels* on the A-weighted scale (*dBA*), which measures sound in approximately the same way the human ear responds. Noise levels fluctuate. The *equivalent sound level* (L_{eq}) is generally accepted as the average sound level.

The Columbia River Gorge is classified as a Class II airshed, which allows moderate degradation of air quality. The project area is not shown as a non-attainment area for criteria pollutants (US EPA 2003).

3.8.2 Potential Effects of the Proposed Action

As stated in Section 3.1, Land Use, only one residence is within 200 feet of the existing road to be cleared and within 760 feet of the beginning of the proposed new section of road. The noise caused by conventional construction equipment is estimated to be 89 dB L_{eq} at a reference distance of 50 feet. It might be audible at the residence, depending on terrain and wind conditions, but work would be confined to daylight hours and weekdays, and would occur intermittently during a relatively brief 3- to 4-week period. There are no designated recreational trails nearby whose users would be affected by construction noise.

Road clearing and construction could create dust for intermittent periods during the construction period. The distance of the residence from the road and the nearby forested terrain likely would prevent the dust from affecting the residence. The dust might be visible from some viewing areas in still air, but BPA would spray water as necessary to keep dust levels to a minimum. No debris or clearing slash would be burned, and vehicles would be properly maintained to minimize emissions.

Saws used during very dry conditions could accidentally cause a fire, but they would be used the minimum necessary. BPA crews and vehicles would carry fire suppression tools that are required when working in forest areas during fire season, and would observe necessary shutdown periods.

3.8.3 Mitigation for the Proposed Action

To protect public health and safety and minimize noise and air quality impacts, mitigation actions include:

- BPA construction crews would work only during daylight hours and on weekdays to limit noise at the residence.
- BPA crews would spray water as necessary to minimize dust levels during construction.
- BPA crews would carry equipment required for working in forested areas during the dry season and would observe shutdown periods.

3.8.4 Potential Effects of the No Action Alternative

No immediate effects to noise or air quality would occur under this alternative. However, if an emergency road needs to be built, air quality and noise effects could be similar to the proposal, depending on the time of year the emergency occurs. No impacts would occur to public health and safety if no construction is undertaken.

3.9 Recreation Resources

3.9.1 Affected Environment

Recreation is an important resource in the Gorge Scenic Area (see Section 3.1.1). The CRGNSA Management Plan has recreation as a major focus and includes the following guidelines:

- New developments and land uses shall not displace existing recreational use.
- Recreation resources shall be protected from adverse effects by evaluating new developments and land uses as proposed in the site plan. An analysis of both onsite and offsite cumulative effects shall be required.
- Mitigation measures shall be provided to preclude adverse effects on the recreation resource.

3.9.2 Potential Effects of the Proposed Action

The proposed road does not cross, nor does it affect, any designated recreation sites or trails of national, regional, or local significance, nor is it visible from key Gorge viewpoints, many of which are used for recreation. Therefore, the project would not affect recreation resources. See

also Section 3.7, Visual Resources. Dust from construction might be visible from some viewpoints during the brief construction period but would be mitigated. See Section 3.8.

Based on the analysis as described above and in sections 3.7 and 3.8, the proposed action would meet CRGNSA Management Plan guidelines that apply to recreational resources.

3.9.3 Potential Effects of the No Action Alternative

No impacts would be expected as no road is planned and there are no known recreational resources in the vicinity of the former road. See also sections 3.7 and 3.8.

3.10 Cultural Resources

3.10.1 Affected Environment

Cultural resources are a major focus for protection in the CRGNSA. The Management Plan includes the following guidelines related to cultural resources:

- Reviewing agencies shall use the following steps under 36 CFR 800 (4.9) for assessing potential effects to cultural resources: (Literature review, Field Inventory, Assessment of Effect, Evaluation of Significance, Mitigation).
- All cultural resource surveys, evaluations, assessments, and mitigation plans shall be performed by professionals whose expertise reflects the type of cultural resources that are involved. Principal investigators shall meet the professional standards published in 36 CFR 61.
- For federal or federally assisted undertakings, the reviewing agency shall complete its consultation responsibilities under Section 106 of the Historic Preservation Act of 1966 [36 CFR 800.1(c)(i)].
- Discovery during construction: All authorizations for new developments or land uses shall require the immediate notification of the reviewing agency if cultural resources are discovered during construction or development. If cultural resources are discovered, particularly human bone or burials, work in the immediate area of discovery shall be suspended until a cultural resource professional can evaluate the potential significance of the discovery and recommend measures to protect and/or recover the resource.
- If the discovered material is suspected to be human bone or a burial, the following procedures shall be used:
 - A. The applicant shall stop all work in the vicinity of the discovery.
 - B. The applicant shall immediately notify the Forest Service, the applicant's cultural resource professional, the county coroner, and appropriate law enforcement agencies.
 - C. The Forest Service shall notify the tribal governments if the discovery is determined to be an Indian burial or a cultural resource.

3.10.2 Potential Effects of the Proposed Action

BPA reviewed archaeological survey and site inventory files at the Washington State Office of Archaeology and Historic Preservation and found no records of archaeological or cultural resources in the vicinity of the proposed project. Applied Archaeological Research, an

archeological consultant with years of experience performing surveys for federal clients, conducted an on-site survey and found no evidence of archaeological resources along the proposed new section of road (AAR 2003). Therefore, no effects on historic or archaeological resources are expected. The consultant's report, which follows the required methods for assessing effect, has been submitted to the State Historic Preservation Office in accordance with Section 106 of the Historic Preservation Act of 1966.

In the unlikely event cultural resources are uncovered during construction, the USFS and an archaeologist will be notified and work will be suspended until the finds can be inspected and assessed. BPA would notify the appropriate Tribal government in the event the discovery is determined to be an Indian burial or cultural resource. The CRGNSA Management Plan guidelines outline the standard procedures BPA follows for all its proposals that could affect cultural resources. Those procedures have been and will be followed for this project as well. See also Section 4.6 of this EA.

3.10.2 Potential Effects of the No Action Alternative

No impacts would be expected in the short term as no road is planned. The potential for disturbance to cultural resources by a future emergency road is unknown, as the area has not been surveyed. It is unlikely, however, that additional effects would occur, because the existing road has already disturbed the ground, and the landslide would have either buried or dislodged any artifacts in its path.

3.11 Cumulative Effects of the Proposed Action

The new road would not open additional land to development because most of it is on USFS land. The road would be gated to discourage unauthorized access by motorized recreational vehicles which apparently use other unimproved roads in the area, so the road's presence would not add to the habitat damage that such use can cause. Its use a few times a year by BPA maintenance crews would not noticeably add to disturbance of wildlife already caused by other sources in the area. There would be no noticeable additional erosion or sedimentation impacts to those already occurring from other natural or human activities. Although the road would encroach on a wetland buffer zone, the wetland itself would not be directly affected, so the project would not result in additional loss of wetlands in this region.

Forest land in the Scenic Area probably is being permanently converted to other uses at a slower rate than in nearby areas outside the Scenic Area boundaries; but loss of one acre of second- or third-growth forest in a linear configuration is unlikely to add significantly to losses occurring for other reasons. The road would not change the visual quality of the Scenic Area and would create no noticeable additional noise or air quality impacts in the area once construction is complete.

Chapter 4. Environmental Consultation, Review, and Permit Requirements

4.1 National Environmental Policy Act

This environmental assessment was prepared according to NEPA (42 USC 4321 et seq.), which requires analysis of the environmental effects of major federal actions or decisions. Based on information contained in the EA, a determination would be made that the proposal would either significantly affect the quality of the human environment, in which case an Environmental Impact Statement (EIS) is required; or that the proposal would not have significant impacts, permitting a Finding of No Significant Impact (FONSI).

4.2 Threatened and Endangered Species

The Endangered Species Act of 1973 (ESA), as amended, requires that federal agencies ensure that their actions do not jeopardize threatened or endangered species and their critical habitats. Section 7 of the Act also requires federal agencies to consult with USFWS and NOAA Fisheries regarding the effects of their actions on listed species. The effects of the proposed project on listed species were analyzed in a *Biological Assessment* (Keller 2003) submitted to USFWS on March 27, 2003. The analysis is summarized in Section 3.5 of this EA. Concurrence with BPA's findings was received from USFWS in a letter dated April 29, 2003. Consultation with NOAA Fisheries was not required because the project would have no effect on ESA-listed anadromous fish species.

4.3 Essential Fish Habitat

The Magnuson-Stevens Fishery Management and Conservation Act establishes Essential Fish Habitat for several species of fish. For the proposed project, analysis of the effects of the project on EFH was combined with the Endangered Species Act analysis in the Biological Assessment. The proposed project would neither destroy nor adversely affect EFH for chinook or coho salmon. See Section 3.5 of this EA.

4.4 Fish and Wildlife Conservation

The Fish and Wildlife Conservation Act of 1980 (16 USC 2901 et seq.) encourages federal agencies to conserve and promote conservation of non-game fish and wildlife species and their habitats. In addition, the Fish and Wildlife Coordination Act (16 USC 661 et seq.) requires federal agencies undertaking projects affecting water resources to consult with the USFWS and the state agency responsible for fish and wildlife resources. USFWS and Washington Department of Fish and Wildlife received scoping letters requesting comment on the proposal, and USFWS received the Biological Assessment of effects on Endangered Species (see sections 3.5 and 4.2). Species and their habitat potentially affected in the project area are discussed in Section 3.5, Fish and Wildlife.

4.5 Migratory Bird Treaty Act

Construction, maintenance, and use of the proposed road would not adversely affect migratory birds protected under the Migratory Bird Treaty Act.

4.6 Archaeological, Cultural, and Historic Resources

Historic, cultural, and archaeological resources are protected by several pieces of legislation and their implementing regulations. They include the National Historic Preservation Act, the Archaeological Resources Protection Act, the American Indian Religious Freedom Act, the Historic Sites Act, and the Native American Graves Protection and Repatriation Act. As stated in Section 3.9, research and on-site surveys found no such resources in the project vicinity. In the unlikely event such resources are found during construction, the notification and consultation requirements of the legislation and regulations will be followed.

4.7 Federal, State, Area-wide, and Local Plan and Program Consistency

The clearing and road construction would require cutting of trees and shrubs on approximately one acre of a Special Management Area (SMA) designated as “Forest” under the CRGNSA Management Plan. Under the SMA guidelines for forest land, road construction or reconstruction is considered a “Review Use.” The USFS, which manages the Scenic Area, has been and will again be given an opportunity to review this document and its consistency with the Management Plan. This EA addresses compliance with the applicable SMA guidelines in several sections in Chapter 3. Because the project is in the Scenic Area, no other state or local plans apply to BPA, as a federal agency.

4.8 Floodplains and Wetlands Protection

The proposed new access road would not be constructed in or near floodplains, therefore no impacts to floodplains are expected. Floodplains might be affected under the No Action Alternative (see Section 3.6.4).

The one forested wetland near the project would not be affected, although the road would encroach on the wetland buffer zone defined under the CRGNSA Management Plan. See Section 3.6 Wetlands and Floodplains, and Appendix A.

4.9 Recreation Resources

The proposed project is in the CRGNSA, whose management plan has recreation as a major focus. No effects on recreational resources are expected (see Section 3.9).

4.10 Permits for Rights-of-Way on Public Lands

An easement for ROW on federal land would be required. BPA would acquire this easement from the U.S. Forest Service, Columbia River Gorge National Scenic Area. See also Section 4.7.

4.11 Clean Air Act

The proposed project would not adversely affect air quality. At most, some dust could be created during the brief construction period but would be kept to a minimum using water if necessary. No debris or slash would be burned. Vehicles used during the construction of the proposed project would be properly maintained so as to minimize emissions. See Section 3.8.

4.12 Global Warming

The proposed project would clear about 12 Douglas fir trees less than 18 inches dbh, as well as some deciduous trees and shrubs. The proposed project’s contribution to global warming would be minor because the amount of tree clearing would be small and because low-growing vegetation would naturally re-vegetate cleared areas. See Section 3.3, Vegetation.

4.13 Noise Control Act

The Federal Noise Control Act of 1972 (42 U.S.C. 4903) requires that federal entities, such as BPA, comply with state and local noise requirements. See Section 3.8.

4.14 Resource Conservation and Recovery Act

No hazardous waste products would be used, discarded or produced by this project. Solid wastes would be disposed of at an approved landfill or recycled.

4.15 Requirements Not Applicable to this Project

Coastal Zone Management Act: The proposed project is at least 600 feet from the nearest stream or water body. The CZMA, as implemented in the state of Washington through the Shorelines Management Act, applies to actions within 200 feet of streams and water bodies.

Farmland Protection Policy Act: The Proposed Action would not affect farmlands.

Discharge Permits under the Clean Water Act: The Proposed Action would not require discharges into waters of the United States.

Permits for Structures in Navigable Waters: The Proposed Action would not involve construction, removal, or rehabilitation of any structures in navigable waters.

Safe Drinking Water Act: The proposed project would not affect any sole source aquifers or other critical aquifers, or adversely affect any surface water supplies.

Executive Order on Environmental Justice: The proposed project would have no effect on minority and low-income populations.

Federal Insecticide, Fungicide, and Rodenticide Act: Herbicides would not be used during project construction or road maintenance.

Toxic Substances Control Act: No toxic substances would be manufactured or used on this project.

Energy Conservation at Federal Facilities: The proposed project would not require any new buildings.

Notice to the Federal Aviation Administration: The proposed project would not create hazards to air traffic, so notice to the Federal Aviation Administration is not required.

Chapter 5. References

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Chapter 6. Persons and Agencies Consulted

The following agencies and groups were sent a letter at the beginning of the project and invited to raise issues of concern. No comments were received in response to that letter, although subsequently, some agencies responded with reviews or concurrences with other consultation documents.

Federal Agencies

United States Army Corps of Engineers (USACE), Portland District

United States Department of Agriculture, Forest Service (USFS), Columbia River Gorge National Scenic Area (CRGNSA)

United States Fish and Wildlife Service (USFWS)

State Agencies

Washington Department of Fish and Wildlife (WDFW)

Washington Department of Natural Resources (WDNR)

Washington Department of Transportation (WDOT)

Washington State Governor's Office

Washington State Office of Archaeology and Historic Preservation

Legislators

State of Washington House and Senate members for Districts encompassing the project area

United States House and Senate members for Districts encompassing the project area

Local Agencies

Skamania County Board of Commissioners

Skamania County Department of Planning

Clark County Board of Commissioners

Tribes

Yakama Nation

Nez Perce Tribe

Confederated Tribes of Warm Springs

Confederated Tribes of the Umatilla Reservation

Other

Private landowners and potentially interested individuals and groups (16 total)

Chapter 7. Glossary

Anadromous: Refers to fish such as salmon that hatch and rear in fresh water, migrate to the ocean to mature, and then return to fresh water to reproduce.

Biological Assessment: A document required by the Endangered Species Act, which evaluates potential effects on listed species and critical habitat prior to implementing a proposed action. A proposed action is defined as any activity authorized, funded or carried out by a federal agency.

Colluvium: Soil material, rock fragments, or both accumulated at the base of steep slopes.

Floodplain: That portion of a river valley adjacent to the stream channel which is covered with water when the stream overflows its banks during flood stage.

Intercepting dips: A big, swale-type dip in an *outsloped* section of road that disperses water off the road surface at a 30-45 degree angle. Water flows into the bottom of the dip and drains into stable, vegetated areas at the side of the road.

Kilovolt: 1,000 volts; a measure of electrical current.

Mitigation: Steps taken to remove or lessen the predicted effects of the proposed action on a resource. Mitigation may reduce, compensate for, or entirely avoid the impact. Some measures, such as adjusting the location of the road to avoid a particular resource, are taken during the study and location process. Others, such as reseeding disturbed areas and/or avoiding the proliferation of weeds, are taken following project completion.

National Environmental Policy Act (NEPA): A 1969 federal law that requires federal agencies to assess the impacts of their proposed actions on the environment.

Noxious weeds: Plants that are injurious to public health, crops, livestock, land, or other property.

Outsloping: Shaping a road surface to slope to the downhill side, which deflects water perpendicular to the traveled way rather than parallel to it. Outsloping prevents concentration of flow on road surfaces that produces rilling, gullying, and rutting.

Reliability: The measure of the ability of a power system to provide uninterrupted service, even while that system is under stress.

Right-of-way (ROW): An easement for a certain purpose over the land of another. BPA usually acquires easements for its transmission lines, roads and other facilities such as guys and anchors.

Transmission line: A high-voltage power line used to carry electric power efficiently over long distances.

Wetlands: An area where the soil experiences anaerobic conditions because of inundation of water during part of any given year. Indicators of a wetland include types of plants, soil characteristics and hydrology.

Appendix A

Practicable Alternative Test for Wetland Buffer

No practicable alternative exists for placement of the proposed access road within the wetland buffer. The proposed road is needed to allow access to tower 9/1 by transmission line equipment for maintenance or emergency work. Due to the size and weight of the equipment, access road slopes must be less than 10 percent. Because tower 9/1 sits on “hogback”-type topography, road slopes would be 20 percent or greater if the access road was placed further to the east or to the west of the proposed location (see Figure 1 in EA).

Natural Resources Mitigation Plan for Wetland Buffer

Existing natural features:

The forested wetland is located approximately 120 feet to the west of the proposed access road in a topographic depression. The wetland is approximately 70 feet by 50 feet and is dominated by slough sedge and red alder. Red alder, Indian plum, vine maple, devil’s club, and sword fern dominate the wetland buffer. Some Douglas fir is present in the outer 100 feet of the wetland buffer boundary.

Proposed Action within and adjacent to the buffer:

Construction of an approximately 22-foot wide access road within a 50-foot wide ROW.

Mitigation Measures:

1. The proposed road would be gated to prevent public access through the wetland buffer.
2. A surface crossing would be constructed to maintain normal hydrologic conditions in the wetland buffer.
3. To avoid soil erosion within the wetland buffer, disturbed areas will be promptly seeded with a native grass seed mixture suited to the site.
4. BPA will limit the number of trees removed within the wetland buffer to those necessary for the 22-foot cleared road width.
5. To minimize establishment of noxious weeds in the wetland buffer, construction equipment will be washed before entering the buffer.